

# **Land Use Control Implementation Plan**

## **IRP SITE DESIGNATION**

**BX Service Station USTs:** IRP Site Code ST-06, RCRA Site Code AOC A.

## **SITE LOCATION**

Keesler Air Force Base (AFB) is located within the city limits of Biloxi, Harrison County, Mississippi, approximately 80 miles east of New Orleans, Louisiana and 60 miles west of Mobile, Alabama. The BX Service Station (Area of Concern A) is located near the center of Keesler AFB at the corner of Larcher Boulevard and Meadows Drive.

## **SITE DESCRIPTION**

AOC A is an active service station and includes service bays and pump islands. Underground storage tanks (USTs) containing gasoline and diesel fuel are located at the western portion of the site. These tanks currently meet federally mandated upgrade requirements for UST systems and have not leaked. In 1987, 10 USTs used to store automotive gasoline were removed from the site. Six of the tanks were located along the eastern side of Building 1504, and four were located just south of the building. Physical evidence, such as stained soils and high organic vapor readings, observed during the excavation showed that one or more of the tanks had leaked in the past. Groundwater flow across the site is to the east.

Additional information on AOC A can be found in the RCRA Facility Investigation Report for the Group 1 Sites (Parsons, April 1999) and the Statement of Basis for AOC A, (Parsons, October 1999). These documents are available in the Keesler AFB Administrative Record and Information Repository.

## **LAND USE CONTROL OBJECTIVES**

The recommended corrective action for AOC A included natural attenuation with long-term groundwater monitoring and land use controls. Investigations and studies conducted at the site indicate that potential risks do exist to receptors. Long-term monitoring of groundwater will be conducted and evaluated annually until contaminant concentrations drop below corrective action objectives or until the USEPA and MDEQ decide the sampling interval can be extended or it is no longer necessary to continue. Nine wells will be sampled annually. An additional five wells at adjacent site Facility 1504 (AAFES Service Station) will be sampled concurrently with the wells at AOC A. The samples will be analyzed for benzene, ethylbenzene, toluene, xylenes, and methyl-tertiary-butylether (MTBE). In addition, natural attenuation parameters will be evaluated

to determine the biodegradation potential of the aquifer. The Project Plan for Long-Term Monitoring for AOC A (Parsons, September 1999) contains the details of the required monitoring.

The purpose of establishing LUCs for AOC A is to ensure that the corrective measures are protective of human health and the environment. The human health risk assessment conducted for this site determined that subsurface soil and groundwater pose a potential risk to future industrial workers. Therefore, current and future use of the property will be restricted and residential development will not be allowed without further corrective action to reduce or eliminate the potential risks. Groundwater withdrawal or use will not be allowed within the boundaries of or near the site. The area affected by the LUCs is shown on **Figure 1**. The area of restricted shallow groundwater use is shown on **Figure 2**. This LUCIP also serves as a Corrective Measures Implementation Plan (CMIP), as required to implement a remedy, pursuant to RCRA.

## **LAND USE CONTROL IMPLEMENTATION TO ACHIEVE OBJECTIVES**

By separate Memorandum of Agreement (MOA) dated August 15, 2000, USEPA and Keesler AFB, on behalf of the Department of the Air Force, agreed to implement basewide, certain periodic site inspections, condition certification, and agency notification procedures designed to ensure the maintenance by Keesler AFB personnel of any site specific LUCs deemed necessary for future protection of human health and the environment. In addition to the LUCs, long-term monitoring of groundwater will be implemented.

The Environmental Restoration Program Manager (ERPM) will be responsible for implementing and maintaining the LUCs and this LUCIP will be referenced in appropriate Keesler AFB basewide planning documents. The LUCs established for AOC A are listed below and the implementation and maintenance procedures are described in detail in the following section of this document.

- The property is restricted from residential use or development. Any change in land use from the Base Service Station shall be approved by USEPA and MDEQ before implementation.
- The shallow aquifer under or near the site shall not be used as a water supply source for any use: potable, industrial, or irrigation.
- Digging into the land surface and soil removal are prohibited without approval of the ERPM.
- No additional structures shall be built on the site without prior notification and approval of the ERPM.
- Maintenance or replacement of existing underground utilities in the same or new locations on the site is restricted without notification and approval of the ERPM.

## **DOCUMENTING AND MAINTAINING LAND USE CONTROLS**

- For major land use changes, written requests will be submitted to USEPA in accordance with the mutually approved LUCAP. Requests will be submitted as soon as a major land use change is anticipated, to allow 90 days for regulatory review and review of remedy selection decision documents.
- The site will be inspected on an annual basis to ensure that unauthorized use does not occur and that the status of the site is unchanged. The AOC A Land Use Controls Annual Inspection Checklist is included as **Attachment A**. The Air Force will submit an annual site status report to USEPA in accordance with the LUCAP. The Air Force will notify USEPA upon the discovery of any unauthorized change in land use.
- These LUCs will be documented in the Keesler AFB Basewide Comprehensive Plan on an annual basis.
- AOC A, as referenced in the LUCs detailed above, is the area shown on **Figure 1**.

## **RECURRENT REVIEW OF LAND USE CONTROLS**

Revalidation of LUCs will be conducted every five years to determine if it is appropriate to amend or remove them. At each revalidation, Keesler AFB will evaluate whether site conditions warrant LUC removal or amendment consideration. If so, requirements for any assessment activities based on risk consideration will be evaluated by Keesler AFB and USEPA. A revalidation request report will be prepared by Keesler AFB and submitted to USEPA.

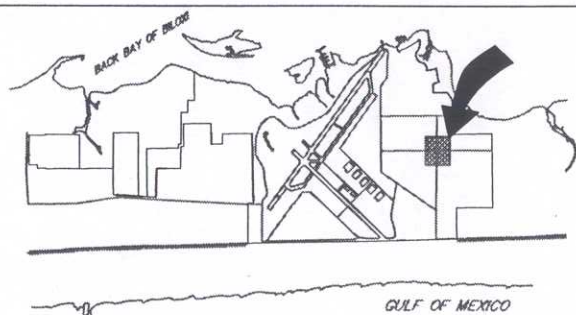
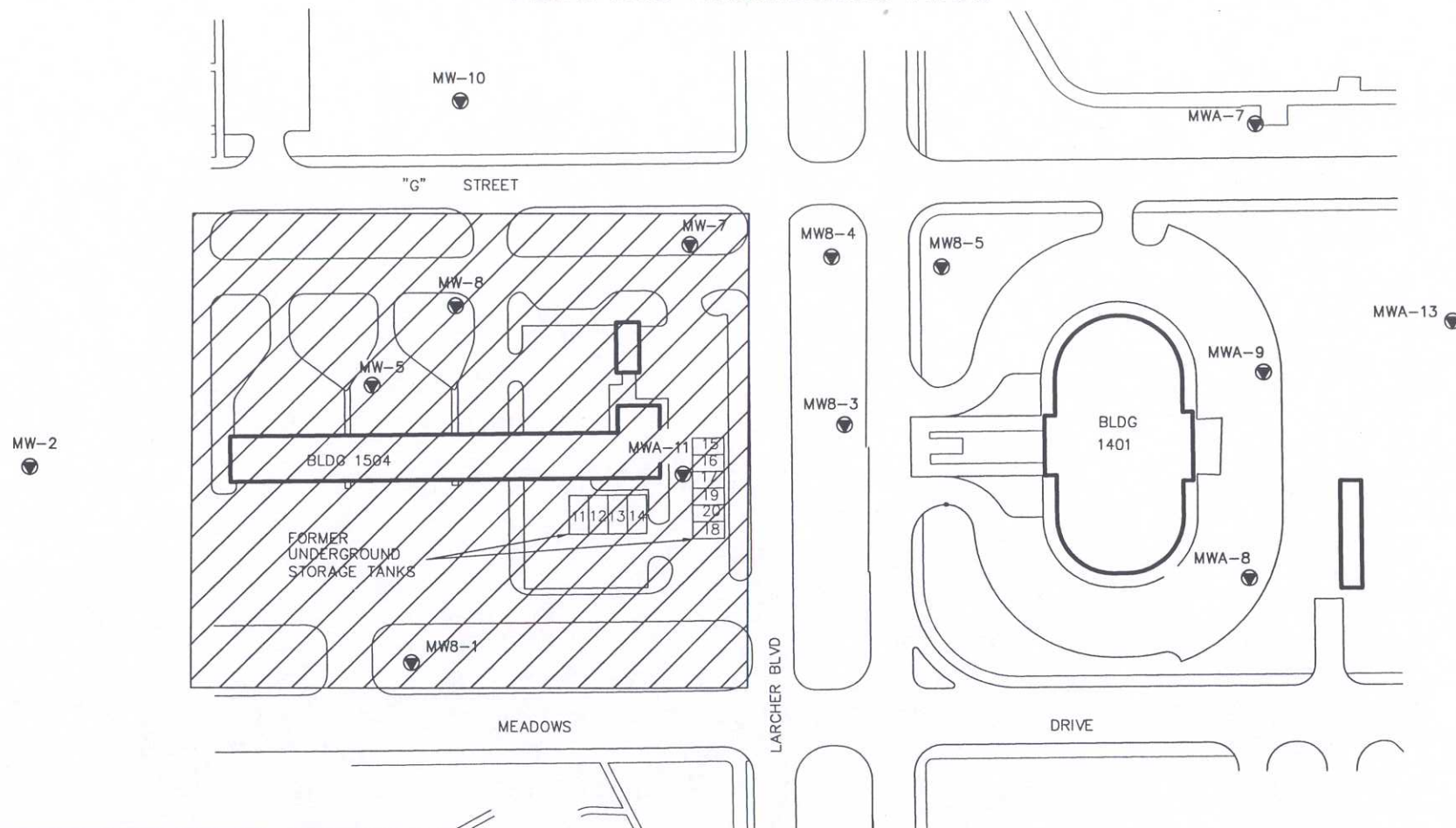
## **MAJOR LAND USE CHANGE EVALUATION**

To be considered for a land use change, reassessment of corrective actions for AOC A will be conducted by Keesler AFB as part of the RCRA Permit. Additional investigations and studies may be required to evaluate any proposed changes.

## **DECISION DOCUMENTS**

The recommendations from the Statement of Basis for AOC A dated December 1999 were natural attenuation with long-term groundwater monitoring and land use controls. This SB was open for public comment from January 13 to February 26, 2000. The SB was approved in April 2000.

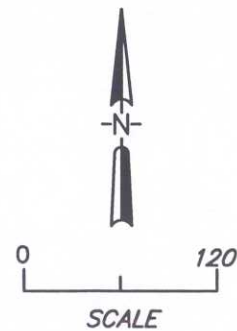
**Figure 1**  
**Area of Concern A**  
**Land Use Restrictions Area**



**KEY MAP**

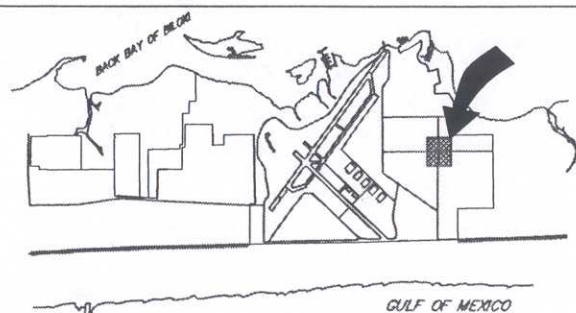
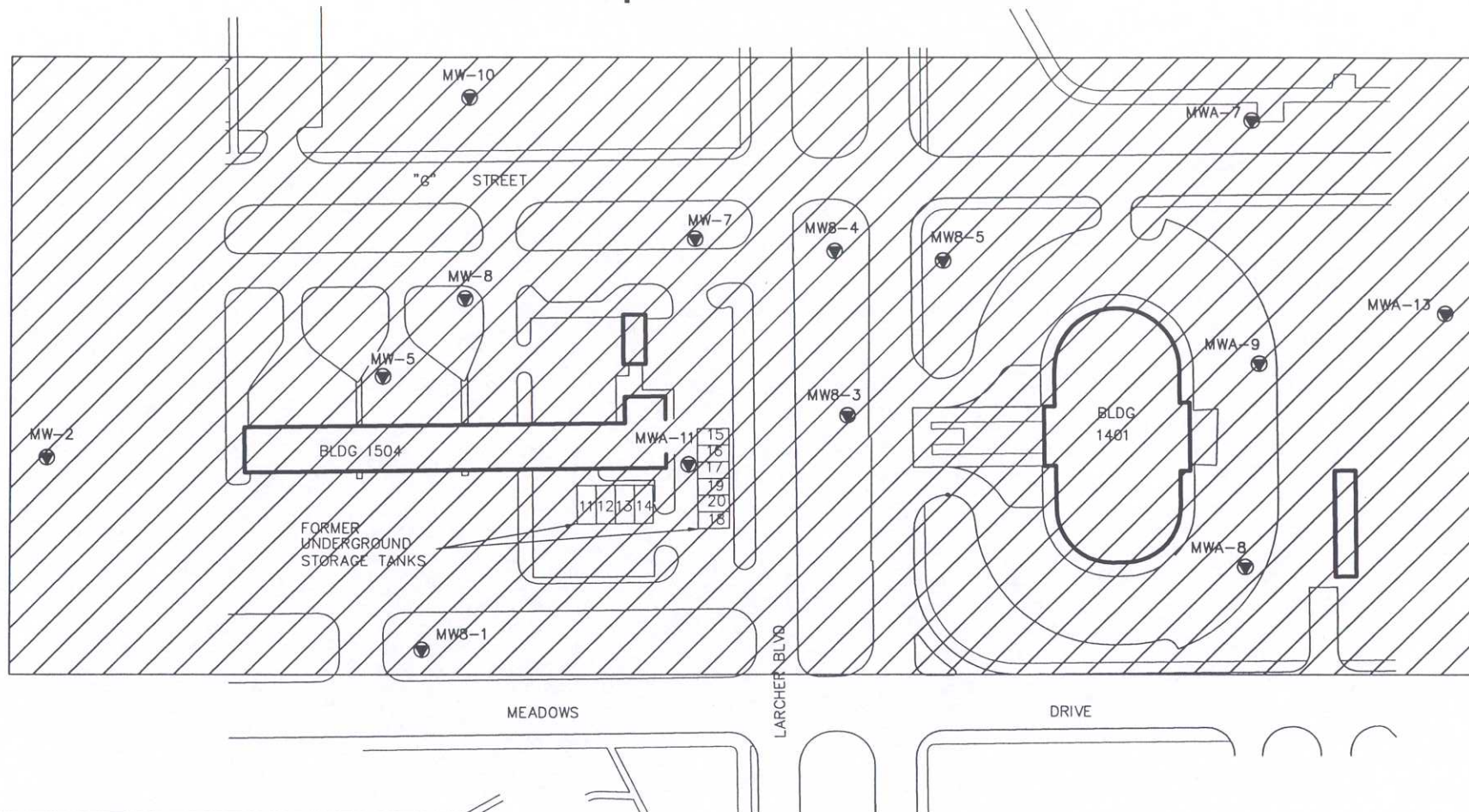
**LEGEND**

-  MONITORING WELL
-  LAND USE RESTRICTIONS AREA





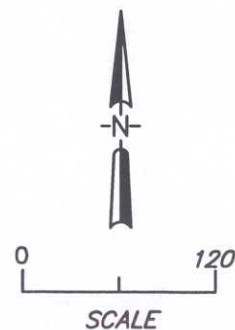
**Figure 2**  
**Area of Concern A**  
**Shallow Aquifer Restricted Use Area**



**KEY MAP**

**LEGEND**

-  MONITORING WELL
-  RESTRICTED USE AREA



## Attachment A

### Area of Concern A (ST-06) Land Use Controls Annual Inspection Checklist

## ATTACHMENT A

# Area of Concern A (ST-06) Land Use Controls Annual Inspection Checklist

DATE \_\_\_\_\_

DATE OF PREVIOUS INSPECTION \_\_\_\_\_

TIME \_\_\_\_\_

DATE OF NEXT PERIODIC REVIEW \_\_\_\_\_

NAME \_\_\_\_\_

If the answer to any of the following questions deviates from the prescribed LUC, please describe and explain on the attached comment sheet.

Land Use Control	Inspection
The property is restricted from residential use or development (Figure 1). Any change in land use from the Base Service Station shall be approved by the ERPM.	<p>Figure 1 depicts residential development restrictions. Has residential development occurred within the restricted area? Have other land use changes occurred?</p> <p><b>Yes      No</b></p> <p>Was the ERPM notified?</p> <p><b>Yes      No</b></p>
The shallow aquifer under or near AOC A shall not be used as a water supply source for any use – potable, industrial, or irrigation.	<p>Figure 2 depicts shallow aquifer use restrictions. Have any wells been completed into the shallow aquifer within the restricted area?</p> <p><b>Yes      No</b></p>
Digging into the land surface and soil removal are prohibited without approval of the Environmental Restoration Program Manager (ERPM).	<p>Has digging or excavation taken place on the site?</p> <p><b>Yes      No</b></p> <p>Was the ERPM notified and was a health and safety plan prepared and approved?</p> <p><b>Yes      No</b></p>
Maintenance of existing utilities or replacement of existing utilities in the same or new location is restricted without prior notification of the ERPM.	<p>Have utilities been worked on or replaced, within the buffer zone?</p> <p><b>Yes      No</b></p> <p>If yes, did the ERPM provide approval?</p> <p><b>Yes      No</b></p>

No structure shall be built on the site without prior notification and approval of the ERPM.	<p>Have any structures been built on the site?</p> <p><b>Yes      No</b></p> <p>If yes, did the ERPM provide approval?</p> <p><b>Yes      No</b></p>
This property will be inspected on an annual basis to ensure that unauthorized use of the property does not occur and that status of the property is unchanged.	<p>Was last year's annual inspection for AOC A completed?</p> <p><b>Yes      No</b></p>
The Air Force will submit an annual site status report to the USEPA in accordance with the mutually approved LUCAP. The Air Force will notify USEPA upon the discovery of any unauthorized change in land use.	<p>Was last year's annual report submitted to the USEPA?</p> <p><b>Yes      No</b></p> <p>Did any unauthorized land use changes occur within the last year?</p> <p><b>Yes      No</b></p> <p>If yes, on what date was the USEPA notified?</p>
For proposed major land use changes,* written requests will be submitted to the USEPA, in accordance with the mutually approved LUCAP. Requests will be submitted as soon as a major land use change is anticipated, to allow sufficient time for regulatory review and amendments to remedy selection decision documents.	<p>Have any major land use changes been requested, since the last inspection report?</p> <p><b>Yes      No</b></p>
These Land Use Controls will be documented in the Keesler AFB Basewide Comprehensive Plan on an annual basis.	<p>Have the Land Use Controls been documented and distributed?</p> <p><b>Yes      No</b></p>

\* Major Land Use Change = Any changes in land use (e.g., from industrial or recreational to residential) that would be inconsistent with those specific exposure assumptions in the human health and/or ecological risk assessments that served as the basis for the LUCs; any site activity that may disrupt the effectiveness of the implemented LUC (for example, excavation at a landfill; groundwater pumping that may impact a groundwater pump and treat system; a construction project that may impact ecological habitat protected by the remedy; removal of a fence; unlocking of a gate, or removal of warning signs); or any site activity intended to alter or negate the need for the specific LUCs implemented at the site.